



Ultrahigh-Speed Switching Applications

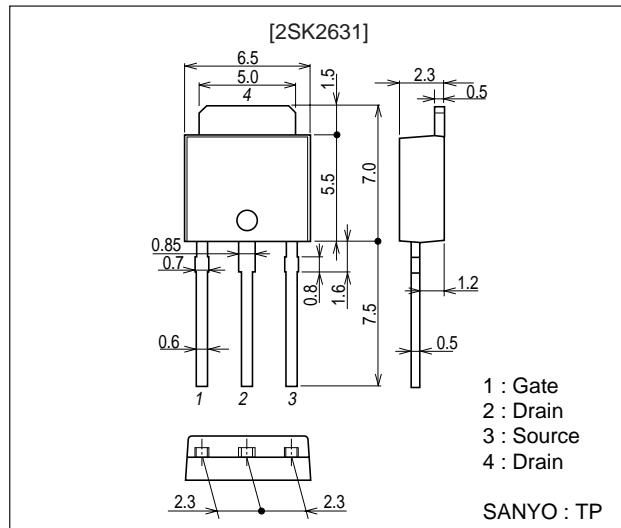
Features

- Low ON resistance.
 - Smaller amount of total gate charge.

Package Dimensions

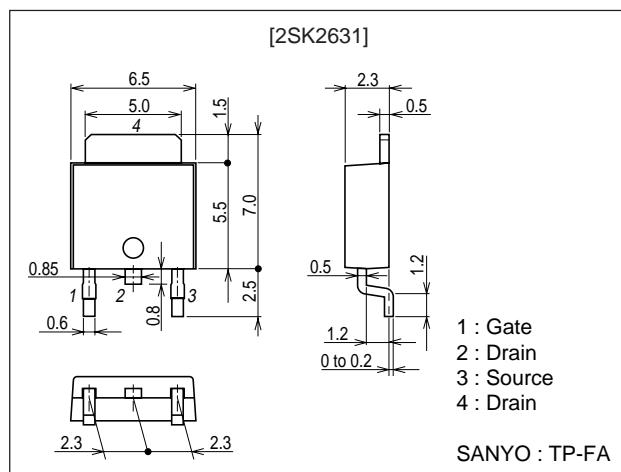
unit : mm

2083B



unit : mm

2092B



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Specifications

Absolute Maximum Ratings at Ta=25°C

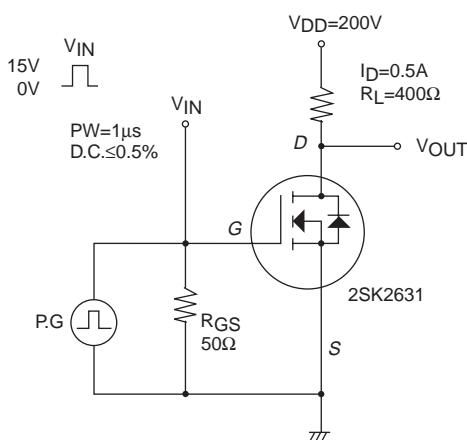
Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		800	V
Gate-to-Source Voltage	V _{GSS}		±30	V
Drain Current (DC)	I _D		1	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	3	A
Allowable Power Dissipation	P _D	T _c =25°C	30	W
			1.0	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

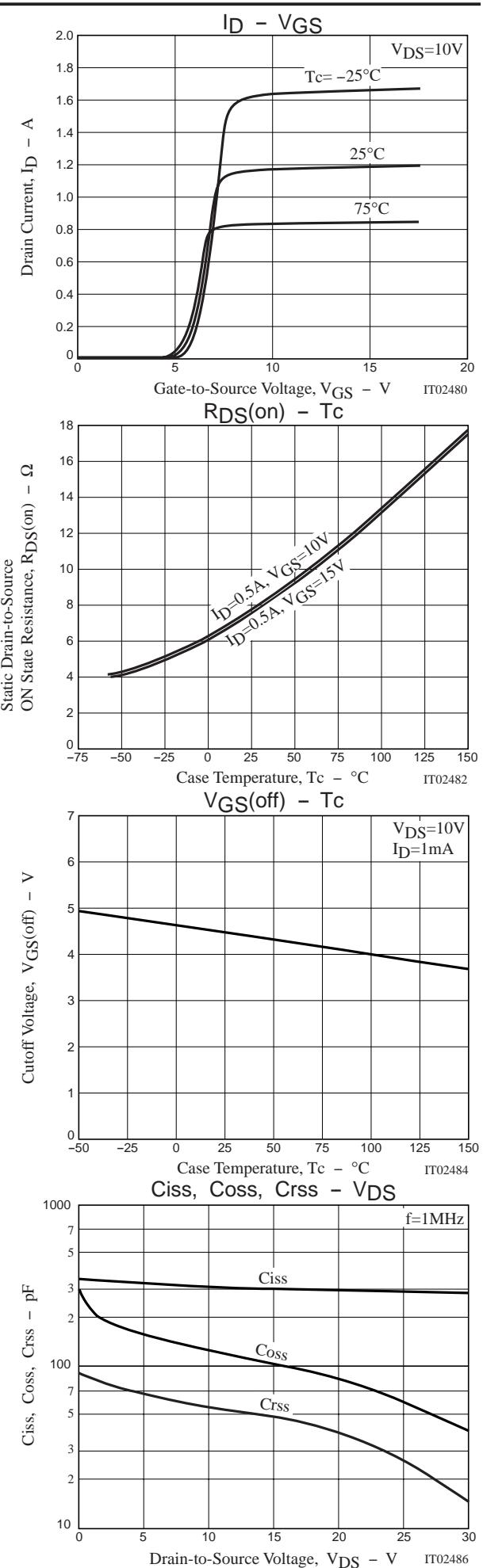
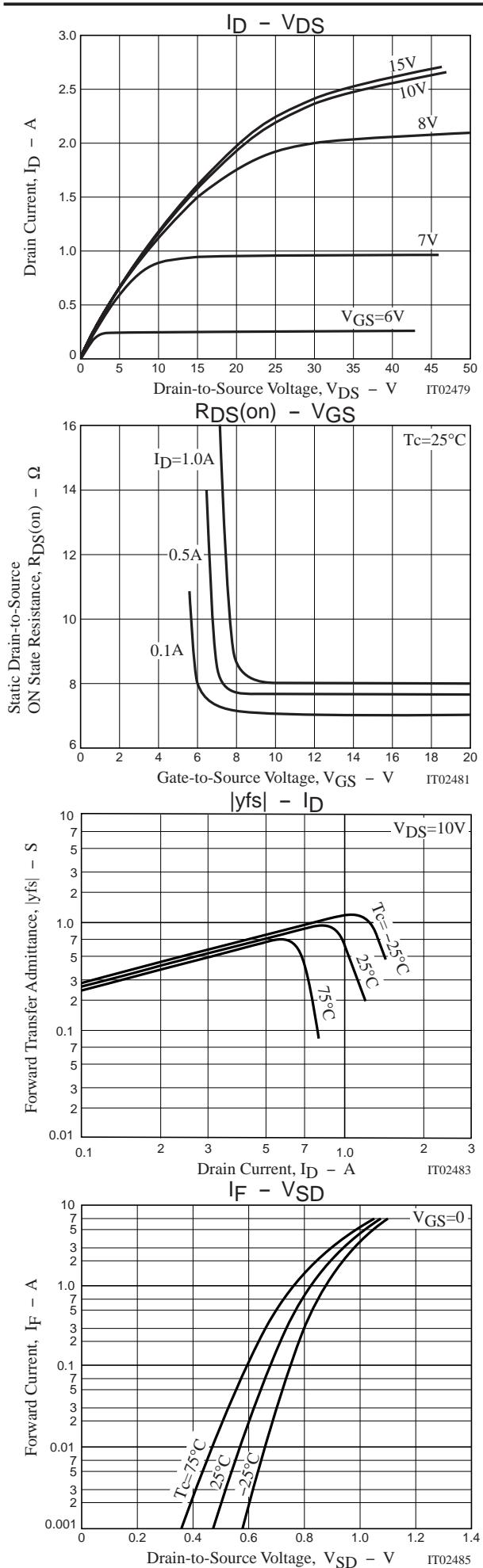
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =1mA, V _{GS} =0	800			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =800V, V _{GS} =0			1.0	mA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±30V, V _{DS} =0			±100	nA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	3.5		5.5	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =0.5A	370	740		ms
Static Drain-to-Source On-State Resistance	R _{D(on)}	I _D =0.5A, V _{GS} =15V		7.5	10	Ω
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		300		pF
Output Capacitance	C _{oss}	V _{DS} =20V, f=1MHz		85		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =20V, f=1MHz		40		pF
Total Gate Charge	Q _g	V _{DS} =200V, I _D =1A, V _{GS} =10V		8		nC
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit		12		ns
Rise Time	t _r	See specified Test Circuit		8		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit		27		ns
Fall Time	t _f	See specified Test Circuit		16		ns
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0		0.82	1.2	V

Marking : K2631

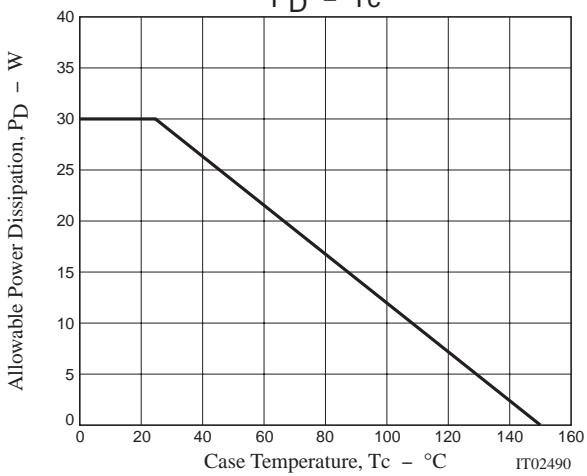
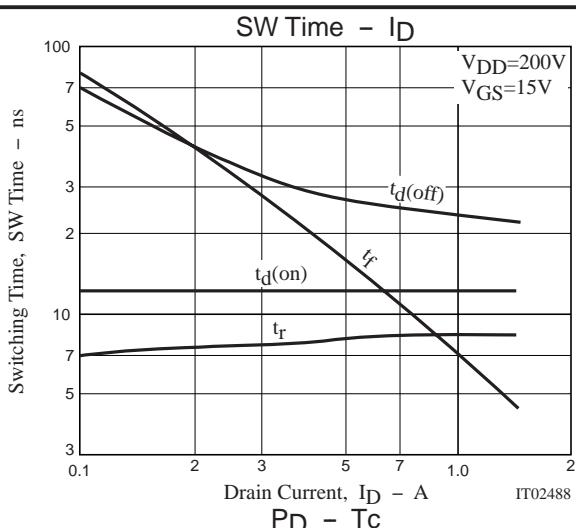
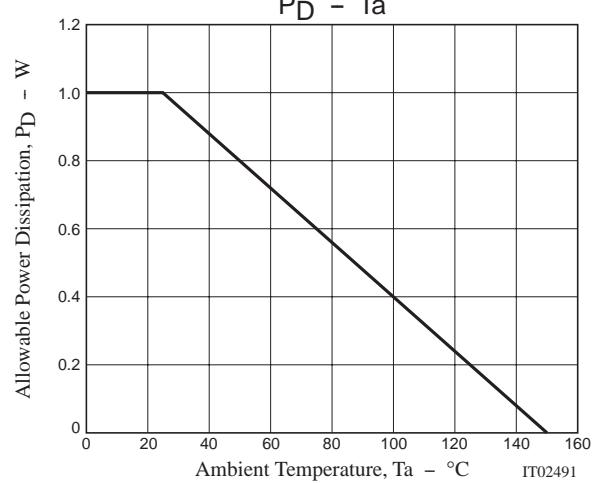
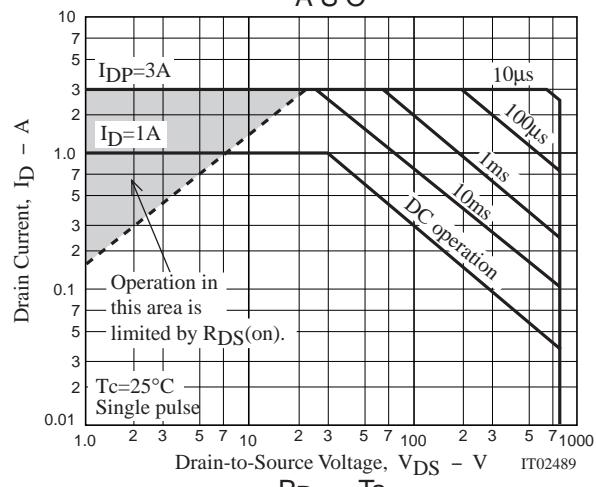
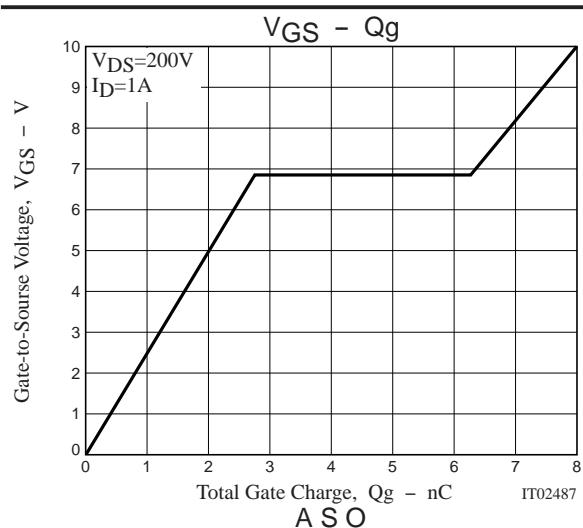
Switching Time Test Circuit



2SK2631



2SK2631



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